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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,443	12/28/2001	Surendra Kumar Rajak	1330.1107	4421
21171	7590	01/13/2005		
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER LE, DEBBIE M	
			ART UNIT 2167	PAPER NUMBER

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/028,443	RAJAK, SURENDRA KUMAR	
	<b>Examiner</b>	<b>Art Unit</b>	
	DEBBIE M LE	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

Applicant's arguments filed on 8/6/04. Claim 4 is canceled. Claims 1-3, 5-21 are presented for examinations.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-3, 5-21 are rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter. The language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basic of statutory subject matter under 35 U.S.C 101.

To expedite a complete examination of the instant application the claims rejected under 35 U.S.C 101 (nonstatutory) above are further rejected as set forth below in anticipate of applicant amending these claims to place them within the four categories of invention.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-21 rejected under 35 U.S.C. 103(a) as being unpatentable over Shen (US Patent 5,937,410) in view of Ng et al (US Patent 6,374,256 B1).

As per claim 1, Shen discloses the recited limitations as follows:

automatically extracting the data directly from the object model (fig. 1, # 22, model extractor 32 extracts logical model from the object model files); and automatically translating (converting) the extracted data to a non-object format (fig. 1, # 24, col. 3, lines 16-20).

Shen does not explicitly teach using an object query language to extract data from the object model. However, Ng teaches extracting the data from the object model using an object query language corresponding to the object model (col. 10, lines 40-43). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references to use an object query language to extract data from the object model because the object query language routines understand the relationships between classes and can do referential navigation without requiring a user to make explicit databases operations (col. 10, lines 44-52).

As per claim 2, Shen discloses the recited limitations as follows:

automatically extracting the data directly from the object model (fig. 1, # 22, model extractor 32 extracts logical model from the object model files); and automatically building (generate) a non-object database from the extracted data (fig. 1, # 28, generates ancillary files, col. 3, line 42).

Shen does not explicitly teach using an object query language to extract data from the object model. However, Ng teaches extracting the data from the object model using an object query language corresponding to the object model (col. 10, lines 40-43). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references to use an object query language to extract data from the object model because the object query language routines understand the relationships between classes and can do referential navigation without requiring a user to make explicit databases operations (col. 10, lines 44-52).

As per claim 3, Shen teaches relationships among database objects (col. 3, line 6). But Shen does not explicitly teach wherein the non-object database is a relational database. However, Ng teaches the non-object database is a relational database (col. 4, lines 1-10). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references to output the extracted data to a relational database because it enables user and/or programmer

efficiency querying data in a manner of joining more than one tables to obtain the data in order to meet the user requirements.

As per claim 5, Ng teach wherein said automatically building builds the non-object database using a query language corresponding to the non-object database and which is different from the object query language corresponding to the object model (col. 4, lines 31-54).

As per claim 6, Ng teaches wherein the non-object database is a relational database (col. 4, lines 41-47).

As per claim 7, Ng teaches wherein the non-object database is a relational database and the query language corresponding to the non-object database is SQL (col. 6, line 50-54).

As per claim 8, Shen teaches .  
selecting object-oriented data (fig. 1, # 20) in an object model (fig. 1, # 22) by a user (fig. 1, # 14), the selected data being stored in a database by the object model (col. 2, lines 9-10);

automatically extracting the selected data directly from the object model (fig. 1, # 22, model extractor 32 extracts logical model from the object model files); and

automatically building (generate) tables for the extracted data (fig. 1, # 28, generates ancillary files, col. 3, line 42), the tables being tables for a target database (col. 3, lines 18-25).

Shen does not explicitly teach using an object query language to extract data from the object model, building tables for the extracted data in accordance with metadata for the extracted data, the tables being tables for a target relational database, automatically inserting the extracted data into the tables using a query language corresponding to the tables and which is different from the object query language. However, Ng teaches extracting the data from the object model using an object query language corresponding to the object model (col. 10, lines 40-43), building tables for the extracted data in accordance with metadata for the extracted data (col. 11, lines 43-46, col. 12, lines 26-31), the tables being tables for a target relational database (col. 7, lines 64-67, col. 4, lines 27-35) and automatically inserting the extracted data into the tables using a query language corresponding to the tables and which is different from the object query language (col. 4, lines 31-54, col. 11, lines 20-67). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references to use an object query language to extract data from object model for building a relational database and then using a SQL to insert the extracted data into the relational table because the object query language routines understand the relationships between classes and can do referential navigation without requiring a user to make explicit databases operations (col. 10, lines 44-52) and

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the SQL enables user and/or programmer efficiency manipulate data in a manner of joining more than one tables to obtain the data in order to meet the user requirements.

As per claim 9, Ng teaches automatically loading the tables with the inserted data into the target relational database (col. 11, lines 1-10).

As per claim 10, Ng teaches automatically generating queries in the object query language corresponding to the object model, for extracting the selected data (fig. 10, # 1010).

Claims 11, 16 are rejected by the same rationale as state in independent claim 8 arguments. Furthermore, Ng teaches selecting object-oriented data in an object model by a human user via a graphical user interface (GUI) (col. 6, lines 65-67).

Claims 12, 14 have the same limitation as claim 9; therefore, they are rejected under the same subject matter.

Claims 13, 17 are rejected by the same rationale as state in independent claim 8 arguments.

Claims 15 have the same limitation as claim 10; therefore, they are rejected under the same subject matter.



As per claim 18, Ng teaches wherein the selection device is one of the group consisting of a graphical user interface and a control table (col. 6, lines 65-67).

Claim 19 is rejected by the same rationale as state in independent claim 2 arguments

Claims 20-21 are rejected by the same rationale as state in independent claim 2 arguments. Furthermore, Shen does not explicitly teach the step of automatically extracting a second set of data directly from the object model and automatically building a second non-object database from the extracted second set of data. However, Shen teaches automatically extracting a first set of data directly from the selected object model and automatically building a first non-object database from the extracted first set of data as argued in the independent claim 2. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to repeating the step of extracting a first set and building a first set to generate a second set and building a second set. The tool allows a user to specify which fields in an object model should be extracted and a user can creates several different non-object databases (indexes) in order to provide user needed, as suggested by Ng (col. 2, lines 38-54).

### ***Response to Arguments***

Applicant's arguments filed 8/6/04 have been fully considered but they are not persuasive.

Applicant argued that claims 1, 2, 13, 16, 19, 20 and 21 recited features are concrete, useful, tangible.

In response, the examiner respectfully disagrees. The claims 1-3, 5-21 are still the result of manipulating of abstract idea. Therefore, they are still rejected under 35 U.S.C 101 because the claimed invention is directed to non-statutory subject matter.

Applicant argued that Shen does not use an object query language for the conversion in the manner recited in claim 1 of the present application as amended by the applicant in the response received on 8/6/04.

In response, the claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shen (US Patent 5,937,410) in view of Ng et al (US Patent 6,374,256 B1) as layout in the above rejection.

Applicant argued that Ng does not use metadata to build tables.

In response, the examiner respectfully disagrees. The examiner submits that Ng does teach use metadata to build tables at column 1, lines 65-67 that "Conventional object-database mapping tools receive **class definitions** from an object-oriented application and automatically generate code, typically stored in a database schema, **to create tables** and other structures for the database. Ng's system using mapping tools based on the **class definitions** in order to create tables or other structures for the

database. The **class definitions** is equivalent to the claim limitation "metadata". From the above passages, Ng does indeed teach the claimed language "building tables... in accordance with metadata".

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

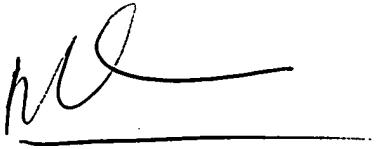
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **DEBBIE M LE** whose telephone number is (571) 272-4111. The examiner can normally be reached on 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN BREENE can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DEBBIE M LE  
Examiner  
Art Unit 2167

Debbie Le

Jan. 5, 2005.



GRETA ROBINSON  
PRIMARY EXAMINER